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CNC CHARLESTON
5090.3a

FINAL ASSESSMENT REPORT FOR FUEL DISTRIBUTION SYSTEM AREAS 2, 3, 4, 5, AND 6 CNC CHARLESTON SC

10/01/1999

ENSAFE INC

L: 10.12.99
Lo 11.19.99

ENSAFE

ENSAFE INC. ENVIRONMENTAL AND MANAGEMENT CONSULTANTS

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Intrinsic w/ GW monitoring

October 1, 1999

Mr. Paul Bristol
South Carolina Department of Health and Environmental Control
Groundwater Quality Section
Bureau of Water
2600 Bull Street
Columbia, SC 29201

RE: Fuel Distribution System, Areas 2, 3, 4, 5, and 6, Charleston Naval Complex, South Carolina (SCDHEC No. 01181)

Dear Mr. Bristol:

EnSafe is please to submit, on behalf of the U.S. Navy, Southern Division Naval Facilities Engineering Command, two copies of the letter report for SCDHEC petroleum site number 01181. This submittal incorporates the results of follow-on investigative activities performed in accordance with recommendations in the CAR and to address any SCDHEC comments concerning these areas.

Should you have any questions or concerns regarding this submittal, please contact me.

Sincerely,

ENSAFE INC.

Craig R. Smith

Attachment

cc: T. Haverkost, EnSafe - Charleston
0144 File

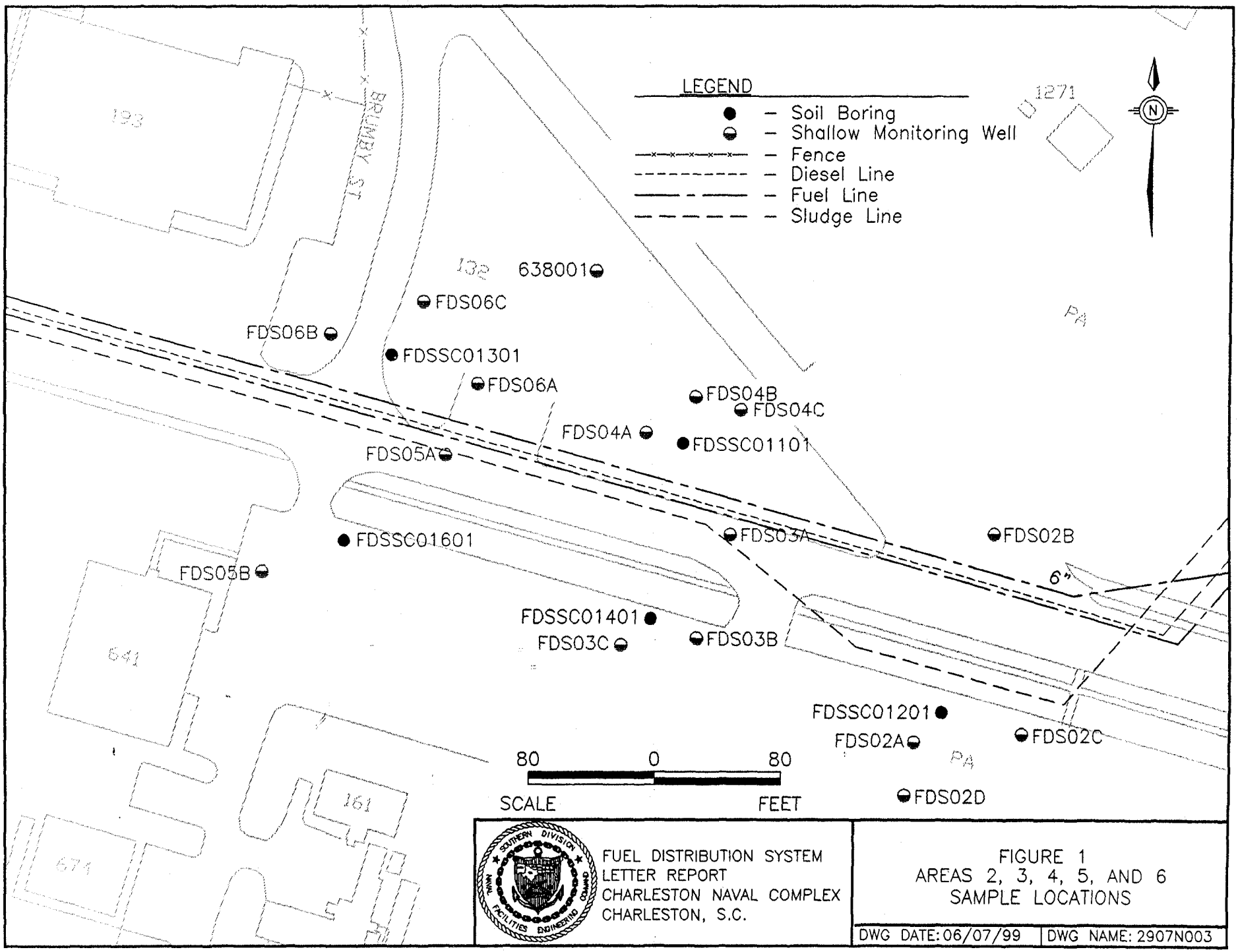
Areas 2, 3, 4, 5, and 6
(SCDHEC No. 01181)

Background

The combined Areas 2, 3, 4, 5, and 6 of the Fuel Distribution System (FDS) are associated with Phase I soil samples FDSSC01101 through FDSSC01401, and FDSSC01601. As reported in the *FDS Contamination Assessment Report (CAR),* these samples exhibited total petroleum hydrocarbons-gasoline range organics ranging from 61.8 micrograms per kilogram (μg/kg) at FDSSC01101 to 124,000 μg/kg at FDSSC01301. These Phase I soil results prompted subsequent Phase II soil and groundwater sampling at the combined areas. Phase II soil sampling revealed chemicals of concern (COCs) for the soil. Benzene was detected at 100 μg/kg at sample FDSSC01201 which exceeded the risk-based screening level (RBSL) of 5 μg/kg. Total naphthalenes of 159,000 μg/kg and 5,490 μg/kg at FDSSC01201 and FDSSC01301, respectively, exceeded the RBSL of 210 μg/kg. To determine if groundwater has been adversely impacted by these petroleum COCs, 14 shallow groundwater monitoring wells were installed and sampled in the combined areas during Phase II. Data from nearby well 638001 were also incorporated into the investigation. The Phase II groundwater investigation revealed the RBSL for total polycyclic aromatic hydrocarbons (PAHs) was exceeded at well FDS06B during both the first and second sampling events, while the RBSL for 2-methylnaphthalene was exceeded at this well during the first event (CAR, EnSafe 1998). Figure 1 depicts the Areas 2, 3, 4, 5, and 6 sample locations.

Follow-on Activities

The FDS CAR recommended and South Carolina Department of Health and Environmental Control (SCDHEC) concurred that removal/remediation of the soil at FDSSC012 was necessary to mitigate the threat of benzene and naphthalene leaching to groundwater at this location. To fill a potential data gap at Areas 2, 3, 4, 5, and 6, the FDS CAR also recommended installation of a monitoring well downgradient of FDSSC012 to determine if these COCs were leaching to


LEGEND
● – Soil Boring
◒ – Shallow Monitoring Well
– Fence
– Diesel Line
– Fuel Line
– Sludge Line
N
1271
133
BRUNSWICK ST
132
638001
FDS06C
FDS06B
FDSSC01301
FDS06A
FDS04B
FDS04C
FDS04A
FDSSC01101
FDS05A
FDS03A
FDS02B
FDSSC01601
FDS05B
6"
FDSSC01401
FDS03C
FDS03B
641
FDSSC01201
FDS02A
FDS02C
PA
80 0 80
SCALE FEET
FDS02D
161
671
FUEL DISTRIBUTION SYSTEM
LETTER REPORT
CHARLESTON NAVAL COMPLEX
CHARLESTON, S.C.
FIGURE 1
AREAS 2, 3, 4, 5, AND 6
SAMPLE LOCATIONS
DWG DATE: 06/07/99
DWG NAME: 2907N003

groundwater. Monitoring well FDS02D was installed downgradient from FDSSC012 in February, 1999, and all area wells were resampled for RBSL parameters in March 1999. Figure 1 depicts the combined Areas 2, 3, 4, 5, and 6 sample locations, including the location of the new well. Attachment A contains the monitoring well construction diagram and well development record for the new well, FDS02D. The FDS CAR contains the boring logs and development records for the previously installed wells in the combined area.

Results

Figure 2 presents the shallow groundwater piezometric surface at Areas 2, 3, 4, 5, and 6 as measured in March 1999 at low-tide. Groundwater flow is generally to the southwest near FDS05B and the south southwest near FDS02D, which is similar to the low-tide flow direction shown in the CAR (EnSafe 1998). This flow regime places the new well directly downgradient from the area of contaminated soil.

Analytes detected in shallow groundwater at Areas 2, 3, 4, 5, and 6 during the post-CAR sampling are summarized in Table 1. These most recent results revealed no detections of volatile organic compounds (VOCs). The only semivolatile organic compounds (SVOCs) detected were benzo(k)fluoranthene at 0.9 micrograms per liter (μg/L) and benzo(b)fluoranthene at 0.9 μg/L, detected in well FDS06C. Both concentrations were below their individual RBSLs of 10 μg/L. These concentrations contributed to a total PAH concentration of 1.80 μg/L, at FDS06C. Four inorganics were also present at concentrations below their respective RBSLs. Attachment B contains the analytical data from the post-CAR sampling. The FDS CAR contains the analytical data from all previous sampling at the combined areas.

Conclusions and Recommendations

As reported in the CAR, the benzene concentration detected in Phase I soil sample FDSSC01201 was 100 μg/kg, which exceeds the RBSL of 5 μg/kg. The concentration of total naphthalenes at

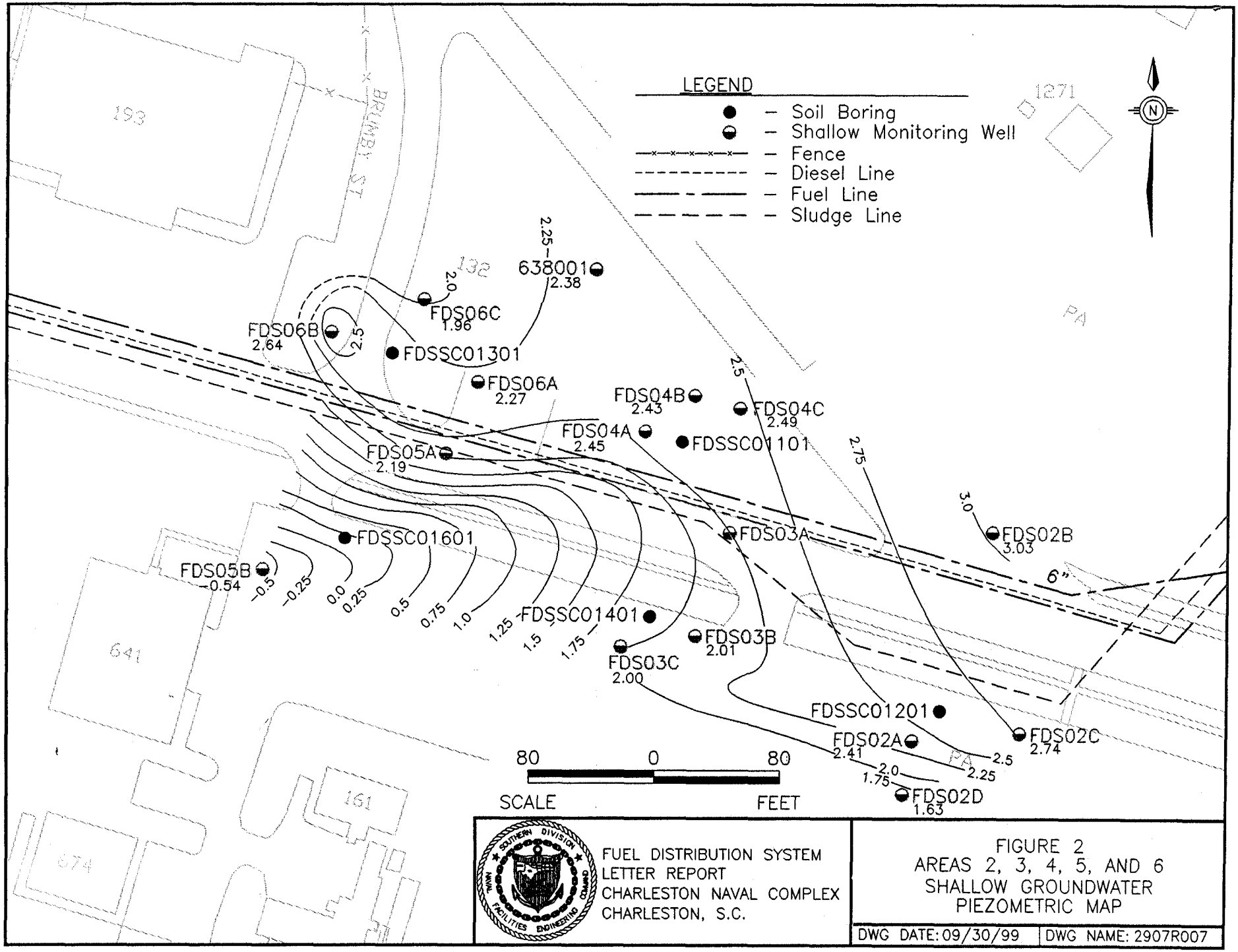

LEGEND
– Soil Boring
– Shallow Monitoring Well
– Fence
– Diesel Line
– Fuel Line
– Sludge Line
N
193
BRUBAKER ST.
132
127
PA
638001
2.38
FDS06C
1.96
FDS06B
2.64
FDSSC01301
FDS06A
2.27
FDS04B
2.43
FDS04C
2.49
FDS04A
2.45
FDSSC01101
FDS05A
2.19
FDSSC01601
FDS03A
FDS02B
3.03
FDS05B
-0.54
FDSSC01401
FDS03B
2.01
FDS03C
2.00
FDSSC01201
FDS02A
2.41
FDS02C
2.74
FDS02D
1.63
641
161
674
6"
2.5
2.75
3.0
2.25
2.0
1.75
1.5
1.25
1.0
0.75
0.5
0.25
0.0
-0.25
-0.5
80
0
80
SCALE
FEET
FUEL DISTRIBUTION SYSTEM
LETTER REPORT
CHARLESTON NAVAL COMPLEX
CHARLESTON, S.C.
FIGURE 2
AREAS 2, 3, 4, 5, AND 6
SHALLOW GROUNDWATER
PIEZOMETRIC MAP
DWG DATE: 09/30/99
DWG NAME: 2907R007

Table 1
Analytes Detected in Shallow Groundwater
Post-CAR Sampling, Areas 2, 3, 4, 5, and 6
Fuel Distribution System

Parameters	Location	Sample Results	RBSL (µg/L)	Exceeds RBSL
Organics (µg/L)				
Total PAHs	FDS06C	1.8	25	No
Benzo(b)fluoranthene	FDS06C	0.9	10	No
Benzo(k)fluoranthene	FDS06C	0.9	10	No
Inorganics (µg/L)				
Arsenic (As)	FDS02A	3.1	50	No
	FDS02C	6.2		No
	FDS02D	11.2		No
	FDS03B	3.5		No
	FDS03C	3.4		No
	FDS05A	3.4		No
	FDS06A	6.6		No
	FDS06C	24.3		No
Barium (Ba)	FDS02A	140	2,000	No
	FDS02B	46.2		No
	FDS02C	25.2		No
	FDS02D	84.9		No
	FDS03A	28.5		No
	FDS03B	27.4		No
	FDS03C	22.3		No
	FDS04A	12.1		No
	FDS04B	25.7		No
	FDS04C	14.9		No
	FDS05A	43.5		No
	FDS05B	39.7		No
	FDS06A	15.4		No
	FDS06B	28.9		No
	FDS06C	31		No
Chromium (Cr)	FDS02A	1.4	100	No
	FDS02B	0.81		No
	FDS02C	0.99		No
	FDS04A	0.81		No
	FDS04B	0.84		No
	FDS04C	0.83		No
	FDS05A	1.5		No
	FDS05B	0.87		No
	FDS06A	11.1		No
	FDS06B	1.5		No
	FDS06C	5.6		No
Lead (Pb)	FDS06A	1.8	15	No
	FDS06C	2		No

Notes:
µg/L = Micrograms per liter
RBSLs from the *South Carolina Risk-Based Corrective Action for Petroleum Releases* (SCDHEC, January 5, 1998).

FDSSC01201 (159,000 µg/kg) and FDSSC01301 (5,490 µg/kg) also exceeded the RBSL (210 µg/kg). Because these samples were collected below the water table at depths between 4.3 and 6.8 feet, they are effectively samples of the aquifer matrix and therefore Site Specific Target Levels would not be applicable. The concentrations at FDSSC01201 also exceed their respective soil-to-groundwater soil screening levels (SSL [DAF=20]) of 30 µg/kg (benzene) and 84,000 µg/kg (naphthalene), (from the *Soil Screening Guidance: Technical Background Document* [USEPA 1996]), suggesting a potential for migration of these constituents from soil to groundwater. However, groundwater analytical data from downgradient wells FDS02C and FDS02D confirms leaching is not occurring at FDSSC01201. In addition, groundwater analytical data from monitoring wells FDS06C and FDS05A confirms no leaching of naphthalene from FDSSC01301. Because the soil at locations FDSSC012 and FDSSC013 do not appear to be causing a groundwater problem, intrinsic remediation is recommended for the impacted soil at the combined Areas 2, 3, 4, 5, and 6. To support this recommendation, monitoring of groundwater is proposed. Monitoring wells FDS02A and FDS02D, located directly downgradient of FDSSC012 and FDS05A and FDS06C located near FDSSC013 should be monitored quarterly for a period of one year. These samples should be analyzed for RBSL VOCs and SVOCs to ensure that constituents detected in soil are not migrating to groundwater.

The groundwater results presented in the CAR show a significant decrease in total PAH concentrations at well FDS06B from 104 µg/L to 27 µg/L. The post-CAR groundwater results show these concentrations have decreased to below the reporting limits. This trend illustrates that intrinsic remediation of groundwater constituents is occurring. The groundwater monitoring program recommended to document intrinsic remediation of soil constituents should be sufficient to also demonstrate that concentrations in groundwater are decreasing by natural attenuation. In addition, groundwater is not currently used at Charleston Naval Complex (CNC) as a source of potable or process water; a basewide potable water system provides drinking and process water to buildings at CNC. This system is to remain in operation under the current base reuse plan. In

addition, the shallow aquifer for this investigation contains significant concentrations of naturally occurring chlorides and elevated total dissolved solids, which makes this water-bearing unit a questionable potable water source.

Attachment A
Monitoring Well Construction Diagram/Well Development Record

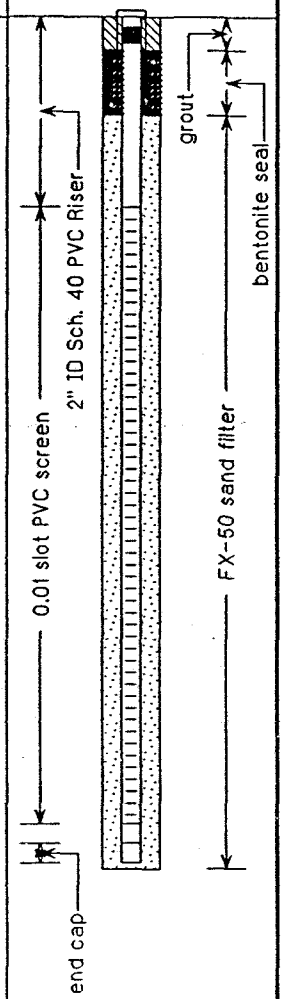
ENSAFE

Monitoring Well NBCGFDS02D

Project: *Fuel Distribution System – Naval Base Charleston*	Coordinates: *371954.90 E, 2321716.18 N*
Location: *Charleston, SC*	Surface Elevation: *7.3 feet msl*
Started at *0830 on 2-02-99*	TOC Elevation: *7.08 feet msl*
Completed at *1040 on 2-02-99*	Depth to Groundwater: *5.42 feet TOC* Measured: *1.66*
Drilling Method: *4.25" ID (8.0" OD) HSA with split spoon*	Groundwater Elevation: *3/3/99 feet msl*
Drilling Company: *Alliance (SC Cert. #889)*	Total Depth: *12.9 feet*
Geologist: *P. Bayley*	Well Screen: *2.9 to 12.3 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	OVA (ppm)	% RECOVERY	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Surface conditions: Asphalt.	
							SP SW	Sand: brown; vf/f w/ trace med.; trace silt; damp; soft.	6.3
					35		CL		5.6
							SM	Clay: dk. gray-brown; trace vf sand; firm; plastic.	5.3 5.1
								Sand: dk. gray-brown; vf/f w/ trace med.; silty; some damp, soft clay; faint chemical odor.	4
					65		OL	Silt: dk. gray-black; clayey; soft; plastic; moist; @4.2', pebbly.	3.3 2
5					65		OL	Silt: as above.	1.3
							ML CL	Silt: olive-brown; clayey; trace vf sand; calcareous; soft; plastic; damp; Marl fill; f/crs sand lenses at 7.4', 7.8', & 7.9'.	.6
					100		SW	Sand: gray; f/crs; trace f/crs PO_4 shell frags; loose; wet.	.7 1.6
10					45		ML CL	Silt: olive-brown; clayey; w/ vf sand; firm; moist to wet; marl fill.	2.7
							SW	Sand: gray; f/crs w/ trace f/crs PO_4 shell frags; wet.	3.8 4.2
					75		SP SM		4.9
					50		OL	Sand: gray; vf/f w/ trace med.; some silt; trace black PO_4 grains; trace shell frags; soft; soupy; wet.	5.6 5.7
15								Silt: dk. gray; some vf sand; soft; wet.	
20									

WELL DIAGRAM



ENSAFE

CHARLESTON NAVAL COMPLEX
WELL DEVELOPMENT STATUS REPORT
ZONE G FDS

WELL DEVELOPMENT SUMMARY

Well:NBCG\FDS02D

Summary Log of well development progress.
Readings are final readings for each visit.
Volume data are cumulative from start of development.

DATE	VOLUME Gallons	pH	Turb NTU	Cond mS/cm	Temp Celsius	Sal %
2-24-99	15	6.81	999	16.9	19.1	-
2-24-99	25	6.93	-10	19.1	21.3	-
2-24-99	35	6.95	-10	19.8	20.8	-
2-24-99	40	6.94	-10	20.2	21.8	-
2-24-99	45	6.93	-10	19.8	21.5	-
2-24-99	50	6.93	-10	20.0	21.4	-
2-24-99	55	6.93	-10	20.0	21.3	-

Well Development Completed on: 2-24-99

COMMENTS:

Attachment B
Analytical Data

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-VOA	SAMPLE ID ------->	FDS-G-W02A-03		FDS-G-W02B-03		FDS-G-W02C-03		FDS-G-W02D-01		FDS-G-W03A-03		FDS-G-W03B-03	
	ORIGINAL ID ----->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	LAB SAMPLE ID --->	37602.06		37631.01		37602.07		37602.04		37631.02		37602.03	
	ID FROM REPORT -->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	SAMPLE DATE ----->	03/03/99		03/04/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE ANALYZED --->	03/08/99		03/08/99		03/08/99		03/08/99		03/08/99		03/05/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ----------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37631	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-VOA	SAMPLE ID ------>	FDS-G-W03C-03		FDS-G-W04A-03		FDS-G-W04B-03		FDS-G-W04C-03		FDS-G-W05A-03		FDS-G-W05B-03	
	ORIGINAL ID ----->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	LAB SAMPLE ID --->	37602.02		37602.08		37602.09		37602.10		37631.03		37602.05	
	ID FROM REPORT -->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	SAMPLE DATE ----->	03/03/99		03/03/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE ANALYZED --->	03/05/99		03/08/99		03/08/99		03/08/99		03/08/99		03/05/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37602	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-VOA								
	SAMPLE ID ------->	FDS-G-W06A-03		FDS-G-W06B-03		FDS-G-W06C-03		
	ORIGINAL ID ----->	FDSGW06A03		FDSGW06B03		FDSGW06C03		
	LAB SAMPLE ID --->	37631.04		37631.05		37631.06		
	ID FROM REPORT -->	FDSGW06A03		FDSGW06B03		FDSGW06C03		
	SAMPLE DATE ----->	03/04/99		03/04/99		03/04/99		
	DATE ANALYZED --->	03/08/99		03/08/99		03/08/99		
	MATRIX ---------->	Water		Water		Water		
	UNITS ----------->	UG/L		UG/L		UG/L		
CAS #	Parameter	37631	VAL	37631	VAL	37631	VAL	
71-43-2	Benzene	5.	U	5.	U	5.	U	
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	
108-88-3	Toluene	5.	U	5.	U	5.	U	
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA	SAMPLE ID ------->	FDS-G-W02A-03		FDS-G-W02B-03		FDS-G-W02C-03		FDS-G-W02D-01		FDS-G-W03A-03		FDS-G-W03B-03	
	ORIGINAL ID ----->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	LAB SAMPLE ID --->	37602.06		37631.01		37602.07		37602.04		37631.02		37602.03	
	ID FROM REPORT -->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	SAMPLE DATE ----->	03/03/99		03/04/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/05/99		03/06/99		03/05/99		03/05/99		03/06/99		03/05/99	
	DATE ANALYZED --->	03/11/99		03/10/99		03/11/99		03/11/99		03/10/99		03/11/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37631	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	0.9	J	25.	U	25.	U	0.6	J	0.6	J	25.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	2.	J	10.	U
51-28-5	2,4-Dinitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
100-02-7	4-Nitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA	SAMPLE ID ------->	FDS-G-W02A-03	FDS-G-W02B-03	FDS-G-W02C-03	FDS-G-W02D-01	FDS-G-W03A-03	FDS-G-W03B-03
	ORIGINAL ID ----->	FDSGW02A03	FDSGW02B03	FDSGW02C03	FDSGW02D01	FDSGW03A03	FDSGW03B03
	LAB SAMPLE ID --->	37602.06	37631.01	37602.07	37602.04	37631.02	37602.03
	ID FROM REPORT -->	FDSGW02A03	FDSGW02B03	FDSGW02C03	FDSGW02D01	FDSGW03A03	FDSGW03B03
	SAMPLE DATE ----->	03/03/99	03/04/99	03/03/99	03/03/99	03/04/99	03/03/99
	DATE EXTRACTED -->	03/05/99	03/06/99	03/05/99	03/05/99	03/06/99	03/05/99
	DATE ANALYZED --->	03/11/99	03/10/99	03/11/99	03/11/99	03/10/99	03/11/99
	MATRIX ---------->	Water	Water	Water	Water	Water	Water
	UNITS ----------->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L

CAS #	Parameter	37602	VAL	37631	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	4.	J	10.	U
100-01-6	4-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	0.6	J	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	3.	J	10.	U	1.	J	1.	J	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA													
	SAMPLE ID ------>	FDS-G-W03C-03		FDS-G-W04A-03		FDS-G-W04B-03		FDS-G-W04C-03		FDS-G-W05A-03		FDS-G-W05B-03	
	ORIGINAL ID ----->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	LAB SAMPLE ID --->	37602.02		37602.08		37602.09		37602.10		37631.03		37602.05	
	ID FROM REPORT -->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	SAMPLE DATE ----->	03/03/99		03/03/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/05/99		03/05/99		03/05/99		03/05/99		03/06/99		03/05/99	
	DATE ANALYZED --->	03/11/99		03/11/99		03/11/99		03/11/99		03/10/99		03/11/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37602	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	0.5	J	0.6	J	25.	U	25.	U	0.8	J	25.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	2.	J	10.	U
51-28-5	2,4-Dinitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
100-02-7	4-Nitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA													
	SAMPLE ID ------>	FDS-G-W03C-03		FDS-G-W04A-03		FDS-G-W04B-03		FDS-G-W04C-03		FDS-G-W05A-03		FDS-G-W05B-03	
	ORIGINAL ID ----->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	LAB SAMPLE ID --->	37602.02		37602.08		37602.09		37602.10		37631.03		37602.05	
	ID FROM REPORT -->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	SAMPLE DATE ----->	03/03/99		03/03/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/05/99		03/05/99		03/05/99		03/05/99		03/06/99		03/05/99	
	DATE ANALYZED --->	03/11/99		03/11/99		03/11/99		03/11/99		03/10/99		03/11/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37602	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	5.	J	10.	U
100-01-6	4-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	4.	J	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	0.6	J	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	1.	J	9.	J	0.9	J	10.	U	0.5	J
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA											
	SAMPLE ID ------->	FDS-G-W06A-03		FDS-G-W06B-03		FDS-G-W06C-03					
	ORIGINAL ID ----->	FDSGW06A03		FDSGW06B03		FDSGW06C03					
	LAB SAMPLE ID --->	37631.04		37631.05		37631.06					
	ID FROM REPORT -->	FDSGW06A03		FDSGW06B03		FDSGW06C03					
	SAMPLE DATE ----->	03/04/99		03/04/99		03/04/99					
	DATE EXTRACTED -->	03/06/99		03/06/99		03/06/99					
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99					
	MATRIX ---------->	Water		Water		Water					
	UNITS ----------->	UG/L		UG/L		UG/L					
CAS #	Parameter	37631	VAL	37631	VAL	37631	VAL				
108-95-2	Phenol	10.	U	10.	U	12.	U				
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	12.	U				
95-57-8	2-Chlorophenol	10.	U	10.	U	12.	U				
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	12.	U				
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	12.	U				
100-51-6	Benzyl alcohol	10.	U	10.	U	12.	U				
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	12.	U				
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	12.	U				
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	12.	U				
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	12.	U				
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	12.	U				
67-72-1	Hexachloroethane	10.	U	10.	U	12.	U				
98-95-3	Nitrobenzene	10.	U	10.	U	12.	U				
78-59-1	Isophorone	10.	U	10.	U	12.	U				
88-75-5	2-Nitrophenol	10.	U	10.	U	12.	U				
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	12.	U				
65-85-0	Benzoic acid	25.	U	0.6	J	3.	J				
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	12.	U				
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	12.	U				
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	12.	U				
91-20-3	Naphthalene	10.	U	10.	U	12.	U				
106-47-8	4-Chloroaniline	10.	U	10.	U	12.	U				
87-68-3	Hexachlorobutadiene	10.	U	10.	U	12.	U				
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	12.	U				
91-57-6	2-Methylnaphthalene	10.	U	10.	U	12.	U				
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	12.	U				
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	12.	U				
95-95-4	2,4,5-Trichlorophenol	25.	U	25.	U	31.	U				
91-58-7	2-Chloronaphthalene	10.	U	10.	U	12.	U				
88-74-4	2-Nitroaniline	25.	U	25.	U	31.	U				
131-11-3	Dimethyl phthalate	10.	U	10.	U	12.	U				
208-96-8	Acenaphthylene	10.	U	10.	U	12.	U				
99-09-2	3-Nitroaniline	25.	U	25.	U	31.	U				
83-32-9	Acenaphthene	10.	U	10.		12.	U				
51-28-5	2,4-Dinitrophenol	25.	U	25.	U	31.	U				
100-02-7	4-Nitrophenol	25.	U	25.	U	31.	U				

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA									
	SAMPLE ID ------->	FDS-G-W06A-03		FDS-G-W06B-03		FDS-G-W06C-03			
	ORIGINAL ID ----->	FDSGW06A03		FDSGW06B03		FDSGW06C03			
	LAB SAMPLE ID --->	37631.04		37631.05		37631.06			
	ID FROM REPORT -->	FDSGW06A03		FDSGW06B03		FDSGW06C03			
	SAMPLE DATE ----->	03/04/99		03/04/99		03/04/99			
	DATE EXTRACTED -->	03/06/99		03/06/99		03/06/99			
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99			
	MATRIX ---------->	Water		Water		Water			
	UNITS ---------->	UG/L		UG/L		UG/L			
CAS #	Parameter	37631	VAL	37631	VAL	37631	VAL		
132-64-9	Dibenzofuran	10.	U	1.	J	12.	U		
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	12.	U		
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	12.	U		
84-66-2	Diethylphthalate	10.	U	10.	U	12.	U		
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	12.	U		
86-73-7	Fluorene	10.	U	2.	J	12.	U		
100-01-6	4-Nitroaniline	25.	U	25.	U	31.	U		
534-52-1	2-Methyl-4,6-Dinitrophenol	25.	U	25.	U	31.	U		
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	12.	U		
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	12.	U		
118-74-1	Hexachlorobenzene	10.	U	10.	U	12.	U		
87-86-5	Pentachlorophenol	25.	U	25.	U	31.	U		
85-01-8	Phenanthrene	10.	U	10.	U	12.	U		
120-12-7	Anthracene	10.	U	10.	U	12.	U		
84-74-2	Di-n-butylphthalate	10.	U	10.	U	12.	U		
206-44-0	Fluoranthene	10.	U	10.	U	12.	U		
129-00-0	Pyrene	10.	U	10.	U	0.6	J		
85-68-7	Butylbenzylphthalate	10.	U	10.	U	12.	U		
91-94-1	3,3'-Dichlorobenzidine	10.	U	10.	U	12.	U		
56-55-3	Benzo(a)anthracene	10.	U	10.	U	12.	U		
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	12.	U		
218-01-9	Chrysene	10.	U	10.	U	12.	U		
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	12.	U		
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	0.9	J		
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	12.	U		
50-32-8	Benzo(a)pyrene	10.	U	10.	U	12.	U		
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	12.	U		
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	12.	U		
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	12.	U		

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-META													
	SAMPLE ID ------>	FDS-G-W02A-03		FDS-G-W02B-03		FDS-G-W02C-03		FDS-G-W02D-01		FDS-G-W03A-03		FDS-G-W03B-03	
	ORIGINAL ID ----->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	LAB SAMPLE ID --->	37602.06		37631.01		37602.07		37602.04		37631.02		37602.03	
	ID FROM REPORT -->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	SAMPLE DATE ----->	03/03/99		03/04/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/09/99		03/09/99		03/09/99		03/09/99		03/09/99		03/09/99	
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99		03/10/99		03/10/99		03/10/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37631	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-38-2	Arsenic (As)	3.1	J	2.9	U	6.2	J	11.2		2.9	U	3.5	J
7440-39-3	Barium (Ba)	140.		46.2		25.2		84.9		28.5		27.4	
7440-43-9	Cadmium (Cd)	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
7440-47-3	Chromium (Cr)	1.4	J	0.81	J	0.99	J	0.7	U	0.7	U	0.7	U
7439-92-1	Lead (Pb)	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
7782-49-2	Selenium (Se)	3.1	U	3.1	U	3.1	U	3.1	U	3.1	U	3.1	U
7440-22-4	Silver (Ag)	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-META													
	SAMPLE ID ------->	FDS-G-W03C-03		FDS-G-W04A-03		FDS-G-W04B-03		FDS-G-W04C-03		FDS-G-W05A-03		FDS-G-W05B-03	
	ORIGINAL ID ----->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	LAB SAMPLE ID --->	37602.02		37602.08		37602.09		37602.10		37631.03		37602.05	
	ID FROM REPORT -->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	SAMPLE DATE ----->	03/03/99		03/03/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/09/99		03/09/99		03/09/99		03/09/99		03/09/99		03/09/99	
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99		03/10/99		03/10/99		03/10/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37602	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-38-2	Arsenic (As)	3.4	J	2.9	U	2.9	U	2.9	U	3.4	J	2.9	U
7440-39-3	Barium (Ba)	22.3	J	12.1	J	25.7		14.9	J	43.5		39.7	
7440-43-9	Cadmium (Cd)	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
7440-47-3	Chromium (Cr)	0.7	U	0.81	J	0.84	J	0.83	J	1.5	J	0.87	J
7439-92-1	Lead (Pb)	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
7782-49-2	Selenium (Se)	3.1	U	3.1	U	3.1	U	3.1	U	3.1	U	3.1	U
7440-22-4	Silver (Ag)	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-META											
	SAMPLE ID ------->	FDS-G-W06A-03		FDS-G-W06B-03		FDS-G-W06C-03					
	ORIGINAL ID ----->	FDSGW06A03		FDSGW06B03		FDSGW06C03					
	LAB SAMPLE ID --->	37631.04		37631.05		37631.06					
	ID FROM REPORT -->	FDSGW06A03		FDSGW06B03		FDSGW06C03					
	SAMPLE DATE ----->	03/04/99		03/04/99		03/04/99					
	DATE EXTRACTED -->	03/09/99		03/09/99		03/09/99					
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99					
	MATRIX ---------->	Water		Water		Water					
	UNITS ---------->	UG/L		UG/L		UG/L					
CAS #	Parameter	37631	VAL	37631	VAL	37631	VAL				
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U				
7440-38-2	Arsenic (As)	6.6	J	2.9	U	24.3					
7440-39-3	Barium (Ba)	15.4	J	28.9		31.					
7440-43-9	Cadmium (Cd)	0.3	U	0.3	U	0.3	U				
7440-47-3	Chromium (Cr)	11.1		1.5	J	5.6	J				
7439-92-1	Lead (Pb)	1.8	J	1.5	U	2.	J				
7782-49-2	Selenium (Se)	3.1	U	3.1	U	3.1	U				
7440-22-4	Silver (Ag)	1.4	U	1.4	U	1.4	U				

*** Validation Complete ***

#01181

AREA= 2, 3, 4, 5 + 6

Attachment B
Analytical Data

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-VOA													
	SAMPLE ID ------->	FDS-G-W02A-03		FDS-G-W02B-03		FDS-G-W02C-03		FDS-G-W02D-01		FDS-G-W03A-03		FDS-G-W03B-03	
	ORIGINAL ID ----->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	LAB SAMPLE ID --->	37602.06		37631.01		37602.07		37602.04		37631.02		37602.03	
	ID FROM REPORT -->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	SAMPLE DATE ----->	03/03/99		03/04/99		03/03/99		03/03/99		03/04/99		03/05/99	
	DATE ANALYZED --->	03/08/99		03/08/99		03/08/99		03/08/99		03/08/99		03/08/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37631	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-VOA	SAMPLE ID ------->	FDS-G-W03C-03		FDS-G-W04A-03		FDS-G-W04B-03		FDS-G-W04C-03		FDS-G-W05A-03		FDS-G-W05B-03	
	ORIGINAL ID ----->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	LAB SAMPLE ID --->	37602.02		37602.08		37602.09		37602.10		37631.03		37602.05	
	ID FROM REPORT -->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	SAMPLE DATE ----->	03/03/99		03/03/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE ANALYZED --->	03/05/99		03/08/99		03/08/99		03/08/99		03/08/99		03/05/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37602	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-VOA									
	SAMPLE ID ------->	FDS-G-W06A-03		FDS-G-W06B-03		FDS-G-W06C-03			
	ORIGINAL ID ----->	FDSGW06A03		FDSGW06B03		FDSGW06C03			
	LAB SAMPLE ID --->	37631.04		37631.05		37631.06			
	ID FROM REPORT -->	FDSGW06A03		FDSGW06B03		FDSGW06C03			
	SAMPLE DATE ----->	03/04/99		03/04/99		03/04/99			
	DATE ANALYZED --->	03/08/99		03/08/99		03/08/99			
	MATRIX ---------->	Water		Water		Water			
	UNITS ---------->	UG/L		UG/L		UG/L			
CAS #	Parameter	37631	VAL	37631	VAL	37631	VAL		
71-43-2	Benzene	5.	U	5.	U	5.	U		
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U		
108-88-3	Toluene	5.	U	5.	U	5.	U		
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U		

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA	SAMPLE ID ------->	FDS-G-W02A-03		FDS-G-W02B-03		FDS-G-W02C-03		FDS-G-W02D-01		FDS-G-W03A-03		FDS-G-W03B-03	
	ORIGINAL ID ----->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	LAB SAMPLE ID --->	37602.06		37631.01		37602.07		37602.04		37631.02		37602.03	
	ID FROM REPORT -->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	SAMPLE DATE ----->	03/03/99		03/04/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/05/99		03/06/99		03/05/99		03/05/99		03/06/99		03/05/99	
	DATE ANALYZED --->	03/11/99		03/10/99		03/11/99		03/11/99		03/10/99		03/11/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37631	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	0.9	J	25.	U	25.	U	0.6	J	0.6	J	25.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	2.	J	10.	U
51-28-5	2,4-Dinitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
100-02-7	4-Nitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA	SAMPLE ID ------->	FDS-G-W02A-03		FDS-G-W02B-03		FDS-G-W02C-03		FDS-G-W02D-01		FDS-G-W03A-03		FDS-G-W03B-03	
	ORIGINAL ID ----->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	LAB SAMPLE ID --->	37602.06		37631.01		37602.07		37602.04		37631.02		37602.03	
	ID FROM REPORT -->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	SAMPLE DATE ----->	03/03/99		03/04/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/05/99		03/06/99		03/05/99		03/05/99		03/06/99		03/05/99	
	DATE ANALYZED --->	03/11/99		03/10/99		03/11/99		03/11/99		03/10/99		03/11/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ----------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37631	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	4.	J	10.	U
100-01-6	4-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	0.6	J	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	3.	J	10.	U	1.	J	1.	J	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA	SAMPLE ID ------->	FDS-G-W03C-03		FDS-G-W04A-03		FDS-G-W04B-03		FDS-G-W04C-03		FDS-G-W05A-03		FDS-G-W05B-03	
	ORIGINAL ID ----->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	LAB SAMPLE ID --->	37602.02		37602.08		37602.09		37602.10		37631.03		37602.05	
	ID FROM REPORT -->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	SAMPLE DATE ----->	03/03/99		03/03/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/05/99		03/05/99		03/05/99		03/05/99		03/06/99		03/05/99	
	DATE ANALYZED --->	03/11/99		03/11/99		03/11/99		03/11/99		03/10/99		03/11/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ----------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37602	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	0.5	J	0.6	J	25.	U	25.	U	0.8	J	25.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	2.	J	10.	U
51-28-5	2,4-Dinitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
100-02-7	4-Nitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA													
	SAMPLE ID ------->	FDS-G-W03C-03		FDS-G-W04A-03		FDS-G-W04B-03		FDS-G-W04C-03		FDS-G-W05A-03		FDS-G-W05B-03	
	ORIGINAL ID ----->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	LAB SAMPLE ID --->	37602.02		37602.08		37602.09		37602.10		37631.03		37602.05	
	ID FROM REPORT -->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	SAMPLE DATE ----->	03/03/99		03/03/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/05/99		03/05/99		03/05/99		03/05/99		03/06/99		03/05/99	
	DATE ANALYZED --->	03/11/99		03/11/99		03/11/99		03/11/99		03/10/99		03/11/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37602	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	5.	J	10.	U
100-01-6	4-Nitroaniline	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	4.	J	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	0.6	J	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	1.	J	9.	J	0.9	J	10.	U	0.5	J
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA											
	SAMPLE ID ------->	FDS-G-W06A-03		FDS-G-W06B-03		FDS-G-W06C-03					
	ORIGINAL ID ----->	FDSGW06A03		FDSGW06B03		FDSGW06C03					
	LAB SAMPLE ID --->	37631.04		37631.05		37631.06					
	ID FROM REPORT -->	FDSGW06A03		FDSGW06B03		FDSGW06C03					
	SAMPLE DATE ----->	03/04/99		03/04/99		03/04/99					
	DATE EXTRACTED -->	03/06/99		03/06/99		03/06/99					
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99					
	MATRIX ---------->	Water		Water		Water					
	UNITS ----------->	UG/L		UG/L		UG/L					
CAS #	Parameter	37631	VAL	37631	VAL	37631	VAL				
108-95-2	Phenol	10.	U	10.	U	12.	U				
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	12.	U				
95-57-8	2-Chlorophenol	10.	U	10.	U	12.	U				
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	12.	U				
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	12.	U				
100-51-6	Benzyl alcohol	10.	U	10.	U	12.	U				
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	12.	U				
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	12.	U				
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	12.	U				
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	12.	U				
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	12.	U				
67-72-1	Hexachloroethane	10.	U	10.	U	12.	U				
98-95-3	Nitrobenzene	10.	U	10.	U	12.	U				
78-59-1	Isophorone	10.	U	10.	U	12.	U				
88-75-5	2-Nitrophenol	10.	U	10.	U	12.	U				
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	12.	U				
65-85-0	Benzoic acid	25.	U	0.6	J	3.	J				
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	12.	U				
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	12.	U				
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	12.	U				
91-20-3	Naphthalene	10.	U	10.	U	12.	U				
106-47-8	4-Chloroaniline	10.	U	10.	U	12.	U				
87-68-3	Hexachlorobutadiene	10.	U	10.	U	12.	U				
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	12.	U				
91-57-6	2-Methylnaphthalene	10.	U	10.	U	12.	U				
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	12.	U				
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	12.	U				
95-95-4	2,4,5-Trichlorophenol	25.	U	25.	U	31.	U				
91-58-7	2-Chloronaphthalene	10.	U	10.	U	12.	U				
88-74-4	2-Nitroaniline	25.	U	25.	U	31.	U				
131-11-3	Dimethyl phthalate	10.	U	10.	U	12.	U				
208-96-8	Acenaphthylene	10.	U	10.	U	12.	U				
99-09-2	3-Nitroaniline	25.	U	25.	U	31.	U				
83-32-9	Acenaphthene	10.	U	10.		12.	U				
51-28-5	2,4-Dinitrophenol	25.	U	25.	U	31.	U				
100-02-7	4-Nitrophenol	25.	U	25.	U	31.	U				

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW-SVOA											
	SAMPLE ID ------>	FDS-G-W06A-03		FDS-G-W06B-03		FDS-G-W06C-03					
	ORIGINAL ID ----->	FDSGW06A03		FDSGW06B03		FDSGW06C03					
	LAB SAMPLE ID --->	37631.04		37631.05		37631.06					
	ID FROM REPORT -->	FDSGW06A03		FDSGW06B03		FDSGW06C03					
	SAMPLE DATE ----->	03/04/99		03/04/99		03/04/99					
	DATE EXTRACTED -->	03/06/99		03/06/99		03/06/99					
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99					
	MATRIX ---------->	Water		Water		Water					
	UNITS ---------->	UG/L		UG/L		UG/L					
CAS #	Parameter	37631	VAL	37631	VAL	37631	VAL				
132-64-9	Dibenzofuran	10.	U	1.	J	12.	U				
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	12.	U				
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	12.	U				
84-66-2	Diethylphthalate	10.	U	10.	U	12.	U				
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	12.	U				
86-73-7	Fluorene	10.	U	2.	J	12.	U				
100-01-6	4-Nitroaniline	25.	U	25.	U	31.	U				
534-52-1	2-Methyl-4,6-Dinitrophenol	25.	U	25.	U	31.	U				
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	12.	U				
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	12.	U				
118-74-1	Hexachlorobenzene	10.	U	10.	U	12.	U				
87-86-5	Pentachlorophenol	25.	U	25.	U	31.	U				
85-01-8	Phenanthrene	10.	U	10.	U	12.	U				
120-12-7	Anthracene	10.	U	10.	U	12.	U				
84-74-2	Di-n-butylphthalate	10.	U	10.	U	12.	U				
206-44-0	Fluoranthene	10.	U	10.	U	12.	U				
129-00-0	Pyrene	10.	U	10.	U	0.6	J				
85-68-7	Butylbenzylphthalate	10.	U	10.	U	12.	U				
91-94-1	3,3'-Dichlorobenzidine	10.	U	10.	U	12.	U				
56-55-3	Benzo(a)anthracene	10.	U	10.	U	12.	U				
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	12.	U				
218-01-9	Chrysene	10.	U	10.	U	12.	U				
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	12.	U				
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	0.9	J				
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	12.	U				
50-32-8	Benzo(a)pyrene	10.	U	10.	U	12.	U				
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	12.	U				
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	12.	U				
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	12.	U				

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-META													
	SAMPLE ID ------>	FDS-G-W02A-03		FDS-G-W02B-03		FDS-G-W02C-03		FDS-G-W02D-01		FDS-G-W03A-03		FDS-G-W03B-03	
	ORIGINAL ID ----->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	LAB SAMPLE ID --->	37602.06		37631.01		37602.07		37602.04		37631.02		37602.03	
	ID FROM REPORT -->	FDSGW02A03		FDSGW02B03		FDSGW02C03		FDSGW02D01		FDSGW03A03		FDSGW03B03	
	SAMPLE DATE ----->	03/03/99		03/04/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/09/99		03/09/99		03/09/99		03/09/99		03/09/99		03/09/99	
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99		03/10/99		03/10/99		03/10/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37631	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-38-2	Arsenic (As)	3.1	J	2.9	U	6.2	J	11.2		2.9	U	3.5	J
7440-39-3	Barium (Ba)	140.		46.2		25.2		84.9		28.5		27.4	
7440-43-9	Cadmium (Cd)	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
7440-47-3	Chromium (Cr)	1.4	J	0.81	J	0.99	J	0.7	U	0.7	U	0.7	U
7439-92-1	Lead (Pb)	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
7782-49-2	Selenium (Se)	3.1	U	3.1	U	3.1	U	3.1	U	3.1	U	3.1	U
7440-22-4	Silver (Ag)	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-META													
	SAMPLE ID ------>	FDS-G-W03C-03		FDS-G-W04A-03		FDS-G-W04B-03		FDS-G-W04C-03		FDS-G-W05A-03		FDS-G-W05B-03	
	ORIGINAL ID ----->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	LAB SAMPLE ID --->	37602.02		37602.08		37602.09		37602.10		37631.03		37602.05	
	ID FROM REPORT -->	FDSGW03C03		FDSGW04A03		FDSGW04B03		FDSGW04C03		FDSGW05A03		FDSGW05B03	
	SAMPLE DATE ----->	03/03/99		03/03/99		03/03/99		03/03/99		03/04/99		03/03/99	
	DATE EXTRACTED -->	03/09/99		03/09/99		03/09/99		03/09/99		03/09/99		03/09/99	
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99		03/10/99		03/10/99		03/10/99	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	37602	VAL	37602	VAL	37602	VAL	37602	VAL	37631	VAL	37602	VAL
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-38-2	Arsenic (As)	3.4	J	2.9	U	2.9	U	2.9	U	3.4	J	2.9	U
7440-39-3	Barium (Ba)	22.3	J	12.1	J	25.7		14.9	J	43.5		39.7	
7440-43-9	Cadmium (Cd)	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
7440-47-3	Chromium (Cr)	0.7	U	0.81	J	0.84	J	0.83	J	1.5	J	0.87	J
7439-92-1	Lead (Pb)	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
7782-49-2	Selenium (Se)	3.1	U	3.1	U	3.1	U	3.1	U	3.1	U	3.1	U
7440-22-4	Silver (Ag)	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U

*** Validation Complete ***

CHARLESTON CTO-0144 FUEL DISTRIBUTION
POST-CAR GROUNDWATER SAMPLING
AREAS 2, 3, 4, 5, AND 6

SW846-META								
	SAMPLE ID ------->	FDS-G-W06A-03		FDS-G-W06B-03		FDS-G-W06C-03		
	ORIGINAL ID ----->	FDSGW06A03		FDSGW06B03		FDSGW06C03		
	LAB SAMPLE ID --->	37631.04		37631.05		37631.06		
	ID FROM REPORT -->	FDSGW06A03		FDSGW06B03		FDSGW06C03		
	SAMPLE DATE ----->	03/04/99		03/04/99		03/04/99		
	DATE EXTRACTED -->	03/09/99		03/09/99		03/09/99		
	DATE ANALYZED --->	03/10/99		03/10/99		03/10/99		
	MATRIX ---------->	Water		Water		Water		
	UNITS ---------->	UG/L		UG/L		UG/L		
CAS #	Parameter	37631	VAL	37631	VAL	37631	VAL	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	
7440-38-2	Arsenic (As)	6.6	J	2.9	U	24.3		
7440-39-3	Barium (Ba)	15.4	J	28.9		31.		
7440-43-9	Cadmium (Cd)	0.3	U	0.3	U	0.3	U	
7440-47-3	Chromium (Cr)	11.1		1.5	J	5.6	J	
7439-92-1	Lead (Pb)	1.8	J	1.5	U	2.	J	
7782-49-2	Selenium (Se)	3.1	U	3.1	U	3.1	U	
7440-22-4	Silver (Ag)	1.4	U	1.4	U	1.4	U	

*** Validation Complete ***

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

19 November 1999

Department of the Navy
Southern Division NFEC
P.O. Box 190010
North Charleston, SC 29419-9010
Attention: Mr. Gabriel Magwood

Re: Final Assessment Report dated 1 October 1999
Zone G/Site 2,3,4,5,6-Fuel Distribution System (Site Identification # 01181)
Charleston Naval Complex/Charleston Naval Base
Charleston, SC
Charleston County

Dear Mr. Magwood:

The author has completed technical review of the referenced document. As submitted, the report provides a narrative and summary of previous assessment activities and analytical results from additional sampling conducted to establish the environmental fate of suspected contamination at the subject property. Previous analytical results provided indicate that concentrations of PAH and VOC compound(s) (naphthalene, benzene) were reported in soil samples FDSSC01201/FDSSC01301. The reported concentrations exceed the RBSL (Risk-Based Screening Levels, SCDHEC *Risk-Based Corrective Action for Petroleum Releases,* 5 January 1998) and are below proposed RBC (Risk-Based Concentrations for Residential Soils, EPA Region III Risk-Based Concentrations Table, 12 April 1999). Available analytical data and applied interpretations appear to indicate that a reasonable delineation and characterization of the extent and severity of soil contamination have been developed for the FDS Site 2,3,4,5,6 combined area. This information and data were then utilized in evidential discussion(s) for consideration of employing groundwater monitoring in the near term to demonstrate residual soil contamination will not impact groundwater.

With consideration to the above, the author concurs with the proposed groundwater monitoring program. The facility should develop an appropriate SAP (sampling and analysis plan), including proposed sampling schedule. A schedule for development of the requested SAP should be submitted to my attention by 31 December 1999. Should you have any questions please contact me at (803) 898-3559.

Sincerely,

Paul L. Bristol, Hydrogeologist
Groundwater Quality Section
Bureau of Water

cc: Trident District EQC

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

File

13 November 1998

Department of the Navy
Southern Division NFEC
P.O. Box 190010
North Charleston, SC 29419-9010
Attention: Mr. Gabriel Magwood

Re: Environmental Assessment Report dated 10 September 1998
Zone G/Areas 2,3,4,5,6 (Site Identification # 01181)
Fuel Distribution System
Charleston Naval Complex/Charleston Naval Base
Charleston, SC
Charleston County

Dear Mr. Magwood:

The author has completed technical review of the referenced document. As submitted, the report provides a narrative describing environmental assessment activities and analytical results of soil and groundwater sampling conducted to determine if releases have occurred as a result of operation of the referenced piping system. The results presented indicate elevated levels of VOC (aromatic volatile organic compounds) and PAH (polynuclear aromatic hydrocarbon) compounds were detected in groundwater and soil grab samples obtained at the referenced site. These results approach or exceed levels proposed in the SCAP (Soil Corrective Action Plan, amended July 30, 1997) and/or established MCL's and/or health advisories applied to Class GB groundwater.

With consideration to the above comments, the results presented appear to indicate additional endeavors for remedial actions (soils removal) and contamination characterization (assessment activities, including groundwater investigations) are warranted at the referenced site. In this regard, the author concurs with the conclusions and recommendations as provided in the report and the proposed additional assessment activities and remedial actions are approved for implementation. Please find enclosed monitoring well approval # 0301 for the installation of one monitoring well at the subject site.

Please submit a schedule for the above activities to my attention by 2 January 1999.

Should you have any questions please contact me at (803) 734-5328.

Sincerely,

Paul L. Bristol, Hydrogeologist
Groundwater Quality Section
Bureau of Water

enc: monitoring well approval # 0301
cc: Trident District EQC

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

Date of Issue: 13 November 1998
Approval No: 0301

Monitoring Well Installation Approval

Approval is hereby granted to: Charleston Naval Complex/Charleston Naval Base
(on behalf of): Zone G-Area 2,3,4,5,6
Site ID#: 01181
County: Charleston

This approval is for the construction of one (1) monitoring well designated (no designation) in accordance with the construction plans and technical specifications submitted to the Department on 15 September 1998. The monitoring well is to be constructed within the surficial aquifer for the intended purpose of monitoring groundwater quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

1. The surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well be submitted to within thirty (30) days of completion (of last well(s) installed).
(to be submitted with Assessment Report)

2. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.

3. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to Trident District EQC Office (843-740-1590).

4. Please provide groundwater quality analytical data (chemical analyses and/or water level(s)) and associated measurements (i.e., field measurements) to Paul L. Bristol within thirty (30) days of receipt from laboratory.
(to be submitted with Assessment Report)

5. Monitoring wells shall be installed by a well driller certified by the State of South Carolina.

6. Each well shall be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate shall provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification number.
(for permanent wells, only)

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71.

Approved by: Paul L. Bristol

Paul L. Bristol, P.G.
Groundwater Quality Section
Bureau of Water

cc: Trident District EQC